

Remarks/Arguments

In regard to the detailed Office Action “Claim Rejections” for Application Control Number 09/853, the Office Action uses patent 6,131,095 by Low for the basis of the objection—“as being anticipated by Low et al.”. Low’s patent does not mention the term “virtual subdomain”, which is used both in this application (Sun/Choudhry) and its claims, so I request the Examiner allow me to clarify, retain , and amend.

Summary

In summary, new claims are clarified such that “virtual subdomains” become “dynamically generated and/or administered subdomains” or “unregistered and/or unrecognized subdomains”. Low’s “standard subdomains” do not have these dynamic capabilities, and as a result, Low’s system is different and would be less accurate and far more costly. Original claims 1-14 are retained, in the event Examiner determines “virtual subdomain” is acceptable in its restricted, defined terminology, after reviewing below.

Revision for Clarity

The term “virtual subdomain” used in the original 14 claims and rejected is, I believe, correct, when taken in consideration of:

Sun/Choudhry [0001] “This application claims is related to U.S. application Ser. No. 09/476,632 filed by Azkar Choudhry on Dec. 31, 1999 which is commonly assigned with this application.”

Choudhry application subsequently became patent #6,442,602, with very minor changes in the specifications and claims. I shall refer to both Choudhry application and patent as “Choudhry”, and use the easier-to-read Choudhry patent’s side-margin line numberings in the below quotes. To the best of my knowledge, these quotes are identical to the Choudhry’s application quotes. The term “virtual subdomain” is used in Choudhry, and Sun/Choudhry continues its use and meaning as shown below.

In the interest of clarification though, we amended new claims 15 to 44 such that the subdomains used are “dynamically created and/or administered” or are “unregistered and/or unrecognized”, which are also terms used in Choudhry and Sun/Choudhry. The new claims, for the most part, remain the same as the original, except that the two phrases above have been substituted for “virtual” subdomain. These terminology changes are underlined and striked-through to facilitate the Examiner’s reading.

If after reading below and reviewing Choudhry, Examiner believes the original claim language using “virtual subdomain” remains unclear, I would appreciate knowing and will cancel initial claims 1-14.

Differences in Low and Sun/Choudhry--Administrative Difficulties of Low’s Standard Subdomains

Low doesn’t use the term “subdomains” or “virtual subdomain” and instead uses “domains” or “hosted domains”, from which it can be inferred the term “Low’s standard subdomains” would be a standard DNS sublevel domain, which we name “standard

subdomain.” To show the differences between Sun/Choudhry and Low, first, we will explain the administration of standard subdomains at the time of Low’s invention.

Choudhry, filed 12-31-1999 [Col.3 lines 60-67 and Col. 4 lines 1-10]: “In reality, (the process of creating and modifying standard subdomains) may involve accessing physically or remotely the file systems of several servers, including log-on and password procedures. To be done correctly, some form of traffic engineering should be done to estimate the impact of adding a particular subdomain to the current name server with respect to the additional traffic or number of "hits" it will receive. The architecture implemented by the definitions and combinations of the domains and subdomains on specific server machines ultimately defines the performance and responsiveness of the network. Thus, not only do network administrators create new resource records when creating a new subdomain, but they also must continuously modify these records to optimize for ever-changing traffic patterns. A further drawback of the prior art process is that the creation of real subdomains has to be recognized and propagated by DNS servers throughout the Internet, a process that can take from 1 day to 2 weeks including administrative delays and 18 to 24 hours network propagation delay.”

Low shows that his subdomains are the same as the above type of standard subdomains.

Low, filed 12/11/96 [Column 16, 54-56, 63-65]: “For every host domain name in the host domain space there is a Registration Record held by the Duris (“standing for DNS-type URL Server”) system containing the corresponding URI.”

The standard subdomains in Low are registered and recognized by DNS and not dynamic; whereas, the “virtual subdomains” in Sun/Choudhry are unregistered and unrecognized and are dynamic. Low uses entirely DNS and DNS-like systems in his patent; Sun/Choudhry works with, but is not part of DNS. Low and Sun/Choudhry are different types of subdomains and systems.

Differences and Advantages of Sun/Choudhry Subdomains and WebBIZdex System

Sun/Choudhry uses a different type of subdomain than the standard subdomain:

Sun/Choudhry [0026] “As the virtual subdomain which is described in the related and incorporated application is a dynamically created and dynamically managed addressing scheme, the webBIZdex itself may actually be a distributed database across multiple servers and may be dynamically reorganized and changed. This further allows the owners or holders of the electronic business cards to easily and quickly update there own personal information within any database which is linked to the virtual or which is associated to the virtual subdomain for his business card.”

Sun/Choudhry [0037] The invention is realized by associating a web server script with a virtual subdomain server.... The virtual subdomain server is described in the related application.

Sun/Choudhry [0040] ... described in the related application whereby the virtual subdomain server intercepts the request for the unregistered virtual subdomain name....

Sun/Choudhry [0042] Secondly, the owner of a web business card may redirect his virtual subdomain to any web source, at any time, dynamically, due to the dynamic nature of the virtual subdomain redirection capabilities. This eliminates the costly expense of maintenance of a large centralized database of electronic business cards.

Sun/Choudhry's subdomains is explained in Choudhry:

Choudhry [Claim 1]a virtual subdomain on an Internet domain name server, comprising the steps of: receiving from an Internet networked client computer a request for an Internet document at an unrecognized unregistered subdomain address;....

Choudhry [Claim 5]An Internet virtual subdomain name server for providing Internet address management for unregistered and unrecognized subdomains, said virtual subdomain name server comprising:....

Low's patent had no such concept of virtual subdomains that are "dynamically created and/or dynamically managed". And Low doesn't have the concept of "unregistered unrecognized subdomains". Low uses standard, prior art subdomains, which are more difficult to create and manage.

Conclusion:

The reason that the “dynamically generated and/or dynamically managed subdomain” and “unregistered and unrecognized subdomains” are valuable is because these facilitate the administering subdomains and bypasses the DNS propagation delay of subdomains (as explained above). Hence, these reduce administration cost and improve accuracy. Low’s system will be very costly to administer, if it had been utilized on a large scale with thousands or millions of domains with subdomain names that need to be changed rapidly,.

Such can happen in a hypothetical Low-like or Low-anticipated implementation, if for example, thousands or millions of Internet domains had its associated organization’s people’s names listed as subdomains, and these people needed to be change to new domains, because they changed associated organizations. Millions of people’s names may be affected daily, causing complete chaos in different domain administrators’ time schedules and unreliability in subdomain DNS propagation. Low might be useful for telephone numbered subdomains because telephone numbers are fairly static in its described domains and may not require fast DNS propagation. But people can quickly adopt different organizations (domains). Low’s system would be very expensive to administer if people’s names were the subdomain choice. WebBIZdex is specifically designed so that subdomain names can be easily and dynamically changed, even if administered for all Internet domains.

Sun/Choudhry’s WebBIZdex now enable low administrative cost and quickly changing (better accuracy) indexes to be built using subdomains. Using Sun/Choudhry, even end users can quickly create and manage subdomains and can easily and accurately perform

searches, for all subdomain applications in addition to Low's restrictive telephone number subdomain usage, and for large quantities of quickly changing subdomains on many different domain names.

Conditional Request for Constructive Assistance

Applicants have amended the claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason, this application is not believed to be in full condition for allowance, applicants respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. 2173.02 and 707.07(j) in order that the undersigned can place this application in available condition as soon as possible and without the need for further proceeding.